# T16D08 – (16.3) Activation Energy Notes

Name ……………………………………………………..

1. 16.3.1 Describe qualitatively the relationship between the rate constant (k) and temperature (T). (2)
   1. What happens to the rate constant when temperature changes? (provide graph from next slide too)
   2. What equation do we use to represent this relationship? (provide the equation)
   3. What are the variables associated with the Arrhenius equation? (also include the exponential factor)
   4. When the Arrhenius equation is rearranged we get the following expression equal to lnk =
2. 16.3.2 Determine activation energy (Ea) values from the Arrhenius equation by a graphical method. (3)
   1. What does the slope of the Arrhenius plot produce?
   2. What can we calculate from the Arrhenius plot and Arrhenius equation?
   3. Provide a labelled example of the Arrhenius plot:
   4. Draw a graph lnk vs 1/T for two reactions with different Ea’s:
   5. Briefly describe each of the types of catalysts:
      1. Homogeneous
      2. Heterogeneous
      3. Enzymes
   6. Describe the meaning of each:
      1. Promoters
      2. Inhibitors
      3. Catalysts Poisons